Staff Presentation on
Staff Draft
Electricity Demand Forecast Forms and Instructions

Prepared in Support of the
2007 Integrated Energy Policy Report

Docket 06-IEP-1I

October 12, 2006

Lynn Marshall
Demand Analysis Office

Staff Proposed Data Request

Staff is requesting demand forecasts and supporting information from LSEs with annual peak demand > 200 MW.

- Includes 3 IOUs, 13 POUs, and 5 ESPs.
- Data are due by Feb. 1, 2007.
- Instructions and procedures for requesting confidentiality are summarized in ***Draft Demand Forecast Forms And Instructions For The 2007 IEPR - Staff Report.*** (CEC-200-2006-001).

Role of CEC Demand Forecast

Energy Commission demand forecasts serve as a baseline for:

- Resource adequacy assessments
- Analysis of impacts of demand-side programs and policies, including energy efficiency, demand response, and renewables
- CPUC Procurement Proceeding
- Transmission planning studies

Purpose of Requested Data

- Provide alternative views of demand trends throughout the state.
- To support staff forecast development:
  - Need to account for energy efficiency, renewable, and other demand-side program plans.
  - Historic data for calibration and to support geographic disaggregation of the staff forecast.
  - Support assessment of migrating loads.

Major Changes from 2005 IEPR

(1) For the *2007 IEPR*, staff will be developing a climate zone-level forecast.

- IOUs are asked for historic hourly loads for geographic subareas, allowing staff to produce better quality disaggregations of the forecast to control areas, distribution service areas, CA ISO congestion management zones, forecasts for major LSEs, and load pockets.

(2) IOUs and POUs are asked for greater detail on historic and projected municipal migrating loads to support CEC compliance with AB 1723.

- AB 1723 requires that all LSEs shall provide the CEC with its "forecasted load that may be lost or added" by a POU or CCA or served by an ESP. The CEC is to perform an assessment of migrating load in each IOU service territory and submit our results to the CPUC.

Overview of Demand Forecast Process

(Dates are approximate)

- Both staff and LSEs prepare forecasts (Feb. 2007)
- Staff publishes Forecast Comparison Report (March 2007)
- Hearing on differences in demand forecasts (April 2007)
- Revised staff forecasts following Committee direction (May 2007)
- Updated staff forecast (Fall 2007)

Forecast Conventions

- Data are to be submitted through 2018, but the adopted forecast will be for 2008-2018.
- Forecast should include “committed” energy efficiency, renewable, and nondispatchable demand response impacts.
  - Committed programs are those with approved funding and at least a preliminary program plan. For IOUs, 2006-2008 approved program plans are committed.
  - Uncommitted programs are those expected or scheduled, but not approved.
  - Impacts of dispatchable demand response programs are reported, but not included in the forecast.
  - Committed also includes the 2007 Building Standards.

Form 1 Electricity Demand

1.1 Sales by Sector or Class to Bundled Customers
- Record assumptions about migrating load.

1.2 Total Distribution Area Sales by customer category (bundled, resale, Direct Access, CCA, etc.)

1.3 Annual Peak Demand of Bundled Customers by Sector or Class
- Record assumptions about migrating load.

1.4 Total Distribution Area Peak Demand by customer category
- Adds direct access and other departed loads and losses to bundled load to obtain distribution area coincident peak.

Form 1 Electricity Demand, cont.

1.5 Peak demand under high temperature conditions with 1-in-5, 1-in-10, 1-in-20, and 1-in-40 probabilities of occurring.

1.6 Hourly Loads – 8760 hours for selected years by customer category.

1.6b IOUs only –Historic and forecast hourly loads by climate zone or transmission subarea (for example, Divisions or “A-Bank Substations).

Form 1 Electricity Demand, cont.

1.7a and 1.7b Private supply forecast

- Private supply includes self generation, customer side of the meter distributed generation, over the fence sales, and wheeling from a cogenerator to a final user.
- Reports annual energy and expected coincident peak (not capacity).
- Represents total private supply, including the incremental program effects in Form 3.3.

Form 2 Assumptions

- Should include all economic and demographic drivers used to develop the forecast. LSEs should modify forms as appropriate:
  - 2.1 State or National Economic and Demographic Assumptions
  - 2.2 Service area Economic and Demographic Assumptions
  - 2.3a and 2.3b Electricity and natural gas price forecasts used for the forecast
  - 2.4 Customer counts, and any other drivers used to develop the forecast
- Document data sources and assumptions in Form 4.

Forms 3 & 5 Demand-Side Programs

Report both committed and uncommitted impacts:

3.1 Efficiency Program First Year Costs and Impacts

3.2 Efficiency Program Cumulative Impacts (savings from current year program, plus decayed savings from previous years)

3.3 Renewable And Distributed Generation Program Costs and Impacts – including programs to comply with CSI/SB 1.

3.4 Demand Response Program Costs and Impacts

- Methodology, assumptions, and data sources are to be documented in the Form 5 Report.
- In particular, discuss how expected coincident peak impacts of renewable programs were developed.

Form 4 Forecast Methodology

In addition to demand forecast methodology, include:

- Definition of subareas used in Form 1.6b, including a zip code or other geographic identifier.
- Discussion of how migrating load is accounted for
- Weather adjustment methods, including what weather stations are used, and how weather sensitivities were developed.
- Discuss forecast performance and present summary statistics.

Form 6 ESP Forecasts

- ESPs submit at least a forecast of contracted load by IOU area.
- May also submit an expected load forecast to be consistent with the resource plan submittal.
- Include an explanation of the basis of the forecast.